

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A composite material comprising:
a plurality of beads having electrical excitation zone-treated surfaces, said beads having average diameters between about 1 and about 10 mm, wherein at least 50 percent of said beads are at least 50 percent coated with an adhesive, and wherein
a cured form of said adhesive has a hardness ranging from about Shore A ~~25~~ 20 to about Shore A 95 and is used in a quantity such that it represents between about 20 percent and about 80 ~~weight~~ percent of the weight of the composite material, said beads and said adhesive creating a system of void spaces.
2. (Original) The composite material of claim 1 wherein the adhesive coated beads have average diameters between about 1 and about 4 mm.
3. (Original) The composite material of claim 1 wherein said beads are inelastic.
4. (Original) The composite material of claim 1 wherein said beads are elastic.
5. (Original) The composite material of claim 1 wherein said beads are made of polymeric materials selected from the group consisting of polyethylene, propylene and ethyl propylene copolymer.
6. (Currently Amended) The composite material of claim 1 wherein said beads and said adhesive create a system of void spaces that constitutes from about 10 to about 40 volume percent of the total volume of said composite material ~~is substantially comprised of substantially regularly distributed void spaces.~~
7. (Original) The composite material of claim 1 wherein the beads have diameters ranging from about 1 mm to about 4 mm.

8. (Original) The composite material of claim 1 wherein said beads are solid.
9. (Original) The composite material of claim 1 wherein said beads are hollow.
10. (Original) The composite material of claim 1 wherein said beads are made of a ceramic material.
11. (Original) The composite material of claim 1 wherein said beads are made from a glass material.
12. (Original) The composite material of claim 1 wherein said beads are made of a plastic material.
13. (Original) The composite material of claim 1 wherein the beads have one or more holes passing through their bodies.
14. (Original) The composite material of claim 1 wherein said beads are made of a thermosetting material.
15. (Original) The composite material of claim 1 wherein said beads are made of a thermoplastic material.
16. (Original) The composite material of claim 1 wherein the adhesive is made from a two part resin.
17. (Original) The composite material of claim 1 wherein the adhesive is made from a thermosetting synthetic resin.

18. (Original) The composite material of claim 1 wherein the adhesive is made from a thermoplastic synthetic material.

19. (Original) The composite material of claim 1 wherein said beads are of different sizes.

20. (Original) The composite material of claim 1 wherein said beads are comprised of a mixture of different kinds of beads.

21. (Original) The composite material of claim 1 wherein said beads are coated with a coupling agent to promote bead/adhesive bonding.

22. (Original) The composite material of claim 1 wherein said beads are electrical excitation zone-treated more than once to accomplish more than one kind of treatment.

23. (Original) The composite material of claim 1 wherein said beads are coated with a polymeric material by the action of an electrical excitation zone treatment.

24. (Original) The composite material of claim 1 wherein said beads are spherical.

25. (Original) The composite material of claim 1 wherein said beads are ellipsoid.

26. (Original) The composite material of claim 1 wherein said beads are made of different polymeric materials.

27. (Previously Presented) The composite material of claim 1 wherein said material is placed in a cloth casing.

28. (Previously Presented) The composite material of claim 1 wherein said material is placed in a net casing.

29. (Original) The composite material of 1 wherein said material is used in conjunction with a hard plastic, outer shell.

30. (Original) The composite material of claim 1 wherein at least 50 percent of the beads are at least 80 percent covered by the adhesive.

31. (Canceled).

32. (Currently Amended) A water permeable, composite construction material comprising:

a plurality of beads having electrical excitation zone treated surfaces, said beads having average diameters between about 1 and about 10 mm, and wherein

at least 50 percent of said beads are at least 50 percent coated with an adhesive, and wherein

a cured form of said adhesive has a hardness ranging from about Shore A 25 ~~20~~ to about Shore A 95 and is used in a quantity such that it represents between about 20 percent and about 80 ~~weight~~ percent of the weight of the composite material, said beads and said adhesive creating a system of void spaces.

33. (Currently Amended) A breathable padding material, said material comprising:

a plurality of beads having electrical excitation zone treated surfaces, said beads having average diameters between about 1 and about 10 mm, and wherein

at least 50 percent of said beads are at least 50 percent coated with an adhesive and wherein a cured form of said adhesive has a hardness ranging from about Shore A 25 ~~20~~ to about Shore A 95 and is used in a quantity such that it represents between

about 20 and about 80 percent and about 80 ~~weight~~ percent of the weight of the composite material, said beads and said adhesive creating a system of void spaces.

34 - 38. (Canceled).